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SALINES IN APPENDICITIS.¹

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DR. M. H. RICHARDSON, in his article published in the JOURNAL of September 28th, objects very strongly to the use of salines in appendicitis, especially in the early stages; and inasmuch as this is the time when in my opinion they are the most required and will do the most good, I cannot allow some of his positions to pass without comment, particularly as I am one who has "advocated" the prompt and free use of this method of treatment.

In the first place, I think Dr. Richardson does not fully state the case when he says: "The theoretical action of cathartics in peritonitis, as given by various men, consists in an absorption and removal by intestinal drainage of the toxic products of certain micro-organisms which, multiplying in or near the peritoneal cavity, endanger life." Now while this is true, it does not express the whole truth. I am just old-fashioned enough to believe that general bleeding oftentimes does an immense deal of good in the sthenic form of inflammation, not by removing "toxic products" alone, but diminishing the volume of blood in the general circulation, thus unloading the distended vessels in the part inflamed, and facilitating absorption of the liquid exudate, before any purulent degeneration takes place in it. I believe and know from "very considerable experience" that leeches will almost invariably stop

¹ A reply to Dr. Richardson's article of September 23, 1893.



the inflammatory process in orchitis and many other local inflammations, for the same reason. It is not simply the removal of "toxic products," but in the case of appendicitis it is more the removal of exudate while in a liquid state, in order to prevent the "toxic" elements from the intestines poisoning it and thus producing pus.

When we are called to the case there is a beginning or well-advanced peritonitis, caused by septic matter *that has escaped from the appendix* (in the cases where perforation has occurred), all the blood-vessels in the vicinity are enormously distended, and exudate is being poured out in the intervascular spaces. The *prompt* and *free* use of salines unloads these distended vessels, and promotes absorption of the exudate, before it is converted into pus. By thus promptly relieving the congested vessels, and removing pressure, pain and fever are both relieved, and in nine cases in ten, in my "considerable experience" the case is practically ended for that time. Other and similar attacks may follow soon or late, unless operation for removal of the diseased organ is made in the interval, which I always advise.

Again, Dr. Richardson says: "I do not object to carrying out this theory after the appendix has been securely tied, or after it is clear that there is no danger of rapid extravasation, but in the first forty-eight hours of appendicitis, I look upon the administration of salines as extremely dangerous, and as a not infrequent cause of general peritonitis and death. The reasons for this lie in the pathological conditions that exist in a very considerable percentage of cases. If in a given case there is a perforation in an appendix of large lumen, salines by liquefying the feces and increasing peristalsis, *will cause an immediate and almost invariably fatal extravasation.*"

My answer to this is: First, the septic material has already escaped from the appendix and produced the peritonitis, and removing the "shell" which is left does not remove the *cause*, for that has already "gotten in its work" and done all the harm it can. It is the *condition* we are called upon to treat, and not the "tenement" that once held the toxic element. *Removing the former habitat of the cause does not remove the cause or the effect*, but it does add traumatism to an already serious matter.

Again, in my "very considerable experience," I have never seen a case, with one exception, where any fæcal matter has existed in the "lumen" of the appendix, no matter how "large" the lumen. The effect of inflammation is to close the end nearest to the cæcum, so that no material escapes from the bowel. Salines do not, therefore, cause "extravasation" from the intestine. In the single exception alluded to, there was simply the *color* of fæcal matter, and not any substance, that had escaped, and the proximal end was closed, so that no more could escape.

Dr. Richardson says in a subsequent paragraph, "There is the same objection to the use of salines in gunshot wounds of the intestines, in perforation of typhoid fever, or in perforating ulcers of the intestinal tract generally." I agree that there is a most decided objection to the use of salines in the pathological conditions named, but I fail to see wherein the analogy lies between these conditions and those usually found in appendicitis. In the latter there is a perforation through the appendix only, which allows some septic material to escape, while the opening to the bowel is practically shut up. While in the "gunshot wounds, etc.," there is a direct opening into the bowel itself. While the "same objection" may apply in the latter condition it fails to apply in the former, simply from

the fact that the conditions fail to be the same. In "catarrhal appendicitis without perforation" I agree fully with Dr. Richardson that it is the "mildest of diseases" (of the kind), *if you always know it when you see it*. But even that is attended with a certain amount of peritonitis: and salines can do no harm, but can, and do accomplish much good by terminating the case by rapid resolution, thus preserving the integrity of the tissues, so that perforation is much less liable to occur, and "general spreading peritonitis" is prevented. I am fully in accord with Dr. Richardson when he says that these cases of "general spreading peritonitis, far from being curable by salines, are, in my opinion and experience, beyond relief even by the most radical surgical measures, except in very rare instances." I know of several instances, however. I do believe also if the rule should be established in the profession, that at the *very earliest symptoms* of appendicitis salines should be promptly and effectually used, a large number of these cases could be prevented.

When we consider the percentage of natural cures reported, we should hesitate long before operating in the acute stage. Ranvers reports 2,000 cases in the Prussian army with 96 per cent. of cures without operation; Charité Hospital, Berlin, 54 cases with three deaths; Nothnagel's Clinic, Vienna, 65 cases and three deaths, etc. But I do believe strongly in operation after a well-marked attack is convalescent. There is always danger of relapses, and the danger of operation in the interval is, in my opinion, very small — one or two per cent. possibly.

Since June 14, 1892, I have operated nine times in the interval of attacks (none less than two, and one eight attacks). Seven of the nine I treated through the acute stage by salines. During that time I have also treated four others without operating afterwards.

All recovered without any serious symptoms following the operation. No one of the four has yet had relapse. Some of these cases I did not see until pus had formed (as the operation afterward showed), and yet I preferred to risk medical rather than surgical treatment until convalescence was established. I think the result proved the wisdom of my course. Results are, after all, what we work for; and while statistics are often fallacious, yet we are governed by them in a measure in our own line of work.

I am not prepared to say that I should refuse to operate in the acute stage, where there is clearly an abscess to be drained, or a "general spreading suppurating peritonitis"; but I shall in the future be governed by my "very considerable experience," and treat all cases in the *early stages* by salines.

